

The Way Forward: U.S. Residential Mortgage Finance in a Post-GSE World

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Abstract

The “government-sponsored enterprise” (GSE) system of residential mortgage finance is clearly broken. But what will replace it remains an unanswered question. This paper lays out a vision for how private markets would – if given the opportunity – replace the GSEs and provide a fully functioning secondary market for residential mortgages. In the event that the private sector is deemed inadequate for the task, this paper also proposes a “side-by-side” private/government form of mortgage guarantee that would be superior to the “tail risk” or “catastrophe” government insurance proposals that have circulated as alternatives to the GSEs.

Keywords: secondary mortgage market; mortgage-backed securities; mortgage guarantees; fixed-rate mortgages; government-sponsored enterprise

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I. Introduction

The insolvencies and conservatorships of Fannie Mae and Freddie Mac in September 2008 have clearly established the inappropriateness of the “government-sponsored enterprise” (GSE) model for residential mortgage finance in the U.S. Two-and-a-half years later, however, the “\$5 trillion question” – how to replace their presence in the secondary mortgage market – remains an open question.¹

The paper will lay out a vision for how private markets would – if given the opportunity – replace the GSEs and provide a fully functioning secondary market for residential mortgages.² In the event that the private sector is deemed inadequate for the task, this paper also proposes a “side-by-side” private/government form of mortgage guarantee³ that would be superior to the “tail risk” or “catastrophe” government insurance proposals that have circulated as alternatives to the GSEs.

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¹ The Obama Administration’s report on the future of mortgage finance, delivered on February 11, 2011, did not offer a specific proposal but instead outlined three possibilities; see U.S. Department of the Treasury and U.S. Department of Housing and Urban Development (2011). The “\$5 trillion” refers to the approximate sum of the value of the mortgages that are held on the balance sheets of the GSEs and the mortgages that are the collateral for the mortgage-backed securities (MBS) that they have issued and on which they have provided guarantees.

² This essay will focus on single-family residential mortgages (and not multi-family mortgages), since that is the bulk of the business in which the GSEs have been engaged. For example, at the end of 2009, only 6.2% of the mortgages and mortgage-related assets that Fannie Mae held or had securitized involved multi-family housing; for Freddie Mac, the comparable number was 7.4%.

³ This proposal is drawn from Acharya et al. (2011, ch. 8).

II. The Basics of Residential Mortgage Finance⁴

A. Credit Risk.

The fundamental question for lenders in any lending arrangement surely is: “Will I get my money back?” This question is usually described as one of “credit risk”. There are a number of observable factors that influence the degree of credit risk in a mortgage lending arrangement:

- The house serves as collateral for the loan, which decreases the credit risk for the lender. (This collateralized arrangement stands in contrast to a personal loan or credit card loan, where there is no collateral.) But the house may lose value after the loan has been made, which would increase credit risk for the lender.
- The proportion of the house value that is funded by the mortgage. This is frequently described as the “loan-to-value” (LTV) ratio. At the beginning of the mortgage arrangement, this can be equivalently measured by the (percentage) size of the down payment by the buyer on the house. The down payment is a buffer that protects the lender against a fall in the value of the house. Thus, the larger is the (percentage) down payment (the lower is the LTV), the lower is the credit risk for the lender. Also, a lower LTV means that the borrower has a greater “equity” stake in the house and thus would be less likely to default on paying the mortgage.⁵
- The other debt obligations of the borrower.⁶
- The other assets of the borrower.⁷

⁴ This section draws heavily on Frame and White (2011).

⁵ The “reputational costs” of defaulting are also likely to influence the borrower’s likelihood of defaulting and thus influence the credit risk for the borrower.

⁶ Included in the lender’s concern about other debt obligations would be whether the borrower is taking out a second mortgage to fund the down payment (or takes out a second mortgage after the first mortgage has been issued). Although the second mortgage ranks behind the first mortgage in seniority, and thus the first mortgage lender is still buffered against a fall in house value, the owner’s smaller equity position (as well as the debt payments that must go toward the second mortgage) increases the likelihood of default (and of the delays and deadweight costs that accompany a default).

- The credit history of the borrower.
- The employment history of the borrower.
- The borrower's prospective income.
- The proportion of the monthly income that is required to make the monthly mortgage payment.
- The length (term) of the mortgage. The longer is the term of the mortgage, the slower is the pay-down of the loan principal and hence the higher is the probability that the borrower might default with negative equity.

There are also likely to be unobservable factors – due to asymmetric information between the borrower and the lender, whereby the borrower knows more about her repayment possibilities than does the lender.⁸ Before the loan is made, the lender faces an “adverse selection” problem in trying to determine who is most likely to repay the loan; after the loan is made, the lender may have difficulty in monitoring the borrower so as to be reassured that the borrower's circumstances don't change so as to make the repayment of the loan less likely – which is a “moral hazard” problem. Having a repayment schedule that requires monthly payments (as opposed, for example, to solely a “balloon” repayment at the end of the term of the loan) provides some reassurance to the lender; equivalently, a borrower's failure to make a monthly payment may be an “early warning signal” that something is changing with respect to the borrower's repayment ability.

B. Interest rate risk.

⁷ The other assets of the borrower are partly an indication of the borrower's net worth and her ability to liquidate other assets if the household experiences a negative income shock that would otherwise cause the monthly mortgage payment to be difficult to make. The other assets may also be important in the event of a default and the lender is legally able to (and decides to) make claims – to seek recourse – against those assets.

⁸ For example, the borrower may have private knowledge as to prospective changes in household employment that might affect the prospects of repayment.

Since a mortgage is typically a long-term lending arrangement, it involves interest rate risk: As interest rates for similar debt instruments change during the term of the loan, one side of the mortgage transaction will be worse off and the other side better off. For example, if interest rates increase during the term of a fixed-rate mortgage (FRM), the lender is worse off (the lender is earning less than the current opportunity costs), while the borrower is better off (the borrower is paying less than the current opportunity costs). For a FRM, the extent of the interest rate risk increases with the term of the loan.

With an adjustable rate mortgage (ARM), for which the current interest rate that is paid adjusts with an index that is linked to market interest rates, it is clear that the borrower is the party who bears the entire interest rate risk.⁹ With a FRM (and if the borrower cannot prepay the mortgage), the interest rate risk is shared between the lender and the borrower: As was noted before, if interest rates go up, the borrower gains and the lender loses. In contrast, if interest rates fall below the contract rate for a FRM, the lender benefits (since the FRM is now a more valuable asset), but the borrower loses (since the borrower is paying interest at a rate that is now above current market rates).

However, in the U.S. a mortgage borrower always has the opportunity – the option – to prepay all or part of her mortgage. Effectively, this is a “call” option that the borrower pays for, either at the time of loan origination in the form of a higher interest rate or at the time of prepayment in the form of a fee. If a borrower has complete flexibility of prepayment, then with a FRM all of the interest rate risk is borne by the lender:¹⁰ In addition to having a less valuable asset when interest rates rise above the contract rate, the lender does not get the benefit when interest rates decline below the contract rate, since the borrower will be more likely to pay off the

⁹ In practice, lenders often place floors and ceilings on how much the interest rate on the loan can change within a given time period, so that the borrower bears somewhat less of the interest rate risk (and the lender bears more).

¹⁰ And, again, the interest rate on the mortgage loan will be correspondingly higher.

mortgage and refinance at the lower rate. However, if the borrower must pay a fee at the time of prepayment, the borrower is less likely to prepay (and the lender receives an explicit payment in the event that the borrower does prepay), so that the interest rate risk of the lender is reduced.

C. Addressing credit risk.

1. The “traditional” lending structure. Prior to the 1980s, the predominant form of mortgage lending in the U.S. involved a depository institution – a savings institution or a commercial bank – that originated the mortgage loan and held the loan in its own portfolio, financing the loan through the gathering of deposits. The depository institution dealt directly with the borrower and developed expertise in deciding who was a creditworthy borrower and who was not. In essence, this was a vertically integrated lending process: The origination and investment decisions occurred all within the same organization. Thus, the organization that originated the loan would also bear the costs of poor lending decisions and thereby had a direct incentive to try to make good decisions.

2. The newer securitization structure. With securitization, the lending process has become vertically dis-integrated: The originator of the mortgage doesn’t hold it in portfolio but instead sells it to the securitizer.¹¹ The securitizer buys multiple mortgages and bundles (or pools) them into a multi-mortgage security, which is sold to investors. The investors, thus, have a claim on the stream of interest and principal repayments from the underlying mortgages¹² (which are the collateral for the securities), and the investors are the ultimate source of the finance – they are the effective lenders – for the mortgage borrowers.¹³ But the investors are

¹¹ In some instances, if the originator was large enough and had the expertise, the originator might also be the packager.

¹² The simplest of these securities are described as “pass-through” securities, whereby the interest and principal repayments of the mortgage borrowers are passed through to the investors (less expenses and fees).

¹³ Thus, as both a conceptual and a terminological matter, in the vertically dis-integrated securitization model, the “originators” are generally different from the “lenders”.

usually not specialists in the skills of origination and, in any event, are separated from the borrowers by at least two levels: the originators, and the securitizer. Accordingly, the basic issue of credit risk arises: How can the investors in mortgage-backed securities (MBS) be reassured of getting their money back?

One advantage for the investors should be noted immediately: Rather than buying individual mortgages – which might involve a great deal of idiosyncratic risk – the investors are buying claims on multiple (usually hundreds) of mortgages; consequently, the “law of large numbers” is likely to provide the benefit of diversification and reduce greatly the idiosyncratic risk element. Also, a package of mortgages can provide geographic diversification, so that the consequences of local economic shocks are dampened.¹⁴

Also, the originators may offer detailed information (“representations and warranties”) about the quality of the underlying mortgages that have gone into the MBS. But the investors may not be familiar with the originators or their reputations; and the possibility of an originator’s bankruptcy would limit the value of any prior assurances. Consequently, the investors are more likely to look to the securitizer from whom they directly purchase for reassurance. So, how can the securitizer reassure the investors as to credit risk?

One simple solution is for the government to provide an explicit guarantee to the investors. This has been the route undertaken by Government National Mortgage Association (Ginnie Mae), which is an agency within the U.S. Department of Housing and Urban Development (HUD) that guarantees MBS that are based on mortgage loans that have been insured by the Federal Housing Administration (FHA) and/or the U.S. Department of Veterans

¹⁴ Although the traditional model involved the depository institution’s holding many mortgages and thus getting the benefit of the law of large numbers, the legal limitations on the geographic locations of depository institutions that prevailed in the U.S. prior to the 1990s meant that most depository institutions were locally oriented and thus were subject to the adverse effects of local economic shocks.

Affairs (VA).¹⁵ In essence, this pushes the credit risk issue on to the government guarantor – with, of course, the risk that the government guarantor will inadequately deal with the credit risk problem, which then becomes a problem for taxpayers.

A quite similar solution was to have Fannie Mae and Freddie Mac, as GSEs, be the securitizers and directly provide the guarantees.¹⁶ Though the two companies were organized as “normal” corporations, with tens of thousands of shareholders and stock that was traded on the New York Stock Exchange, there were enough special features to these companies that the financial markets treated them as special – as GSEs – and believed that their financial obligations (including the guarantees on the MBS that they issued) carried an “implicit guarantee” from the federal government.¹⁷ In the end, this belief turned out to be correct. And the credit risk problem that the GSEs took over from the MBS investors has indeed become the taxpayers’ problem.¹⁸

In the absence of government guarantees (explicit or implicit), “private label” securitizers have had to devise alternative methods for reassuring investors. The most prominent method has been to partition or “tranche” the securities, so that there is a “junior” security that is the first to absorb the losses from defaults by the underlying mortgage borrowers and a “senior” security that would be buffered by the junior security against those initial default losses (until the losses have mounted so high as to absorb all of the investment in the junior security).¹⁹ In essence, the

¹⁵ It is surely no accident that the first issuance of residential MBS in 1970 carried the guarantee of Ginnie Mae.

¹⁶ Again, it was probably no accident that Freddie Mac was a “fast second” in issuing residential MBS in 1971. Fannie Mae’s first issuance of MBS was in 1981.

¹⁷ See Frame and White (2005) for an overview and Acharya et al. (2011) for an updated picture.

¹⁸ As this is written, the U.S. Treasury has had to supply approximately \$150 billion as a capital contribution to cover the negative net worths of the two GSEs, and this sum is likely to rise to at least \$200 billion and perhaps as high as \$400 billion.

¹⁹ In practice, there are almost always more tranches, with a graduated seniority structure, so that the lower tranches bear greater risk and the higher tranches bear less. With tranching, the securities no longer have a simple pass-through structure. The weighted average of the interest rates paid to the junior and senior securities will roughly

junior security is providing protection for the senior security, and the relative size of the junior security will be crucial for determining the extent of the protection for – the riskiness of – the senior security (for any given quality of the underlying collateral).²⁰

Additional methods of providing reassurance to MBS investors include: guarantees from financially strong third parties (e.g., insurance companies) for some or all of the tranches of a security; the over-collateralization of the mortgage pool, so as to provide an additional “equity” buffer to protect the MBS holders; and the “excess spread” – the difference between what the mortgage borrowers pay in interest and what the MBS investors receive – can be placed in a reserve account that provides a buffer for investors. These methods are not mutually exclusive (nor are they incompatible with tranching).

Further, unless they have sufficient analytical skills of their own, non-specialist MBS investors are likely to seek independent third-party advice as to the creditworthiness of the securities (or the appropriateness of the tranching structure, given the quality of the underlying collateral, etc.) from credit rating agencies or other creditworthiness advisory services.

D. Addressing Interest Rate Risk.

As was discussed above, with FRMs, the lender – either the depository institution in the “traditional” model or the securities investor in the securitization model – bears some or all of the interest rate risk. Since the typical FRM has a 30-year term, this risk is substantial. Indeed, it was insufficient attention to these risks on the part of savings institutions and policy makers that was the initial cause of the woes of the savings and loan (S&L) industry in the late 1970s

equal the interest that the overall pass-through security would carry (which, in turn, roughly equals the average interest rate on the underlying mortgages, minus any fees, etc.).

²⁰ Also, if the securitizer itself were to retain the junior security, this retention would provide even greater assurance to the investors in the senior security, as an indication that the securitizer (who, presumably, knows more about the characteristics of the underlying mortgages than does the investor) believes that the quality of the underlying mortgages is high.

and early 1980s.²¹ Since that time, depository institutions have been “encouraged” by their prudential regulators to try to hedge their interest rate risk (e.g., through the use of interest rate derivatives) and/or to originate and hold more ARMs and/or to sell their FRMs into the secondary market.

Under the securitization model, the interest rate risk is borne by the securities holders. In turn, the investors can hedge these risks with interest rate derivatives. Alternatively, the cash flows from the underlying mortgages can be “sliced and diced” so that some investors are more buffered from interest rate risk (while exposing other investors to heightened interest rate risk).²²

As was discussed above, the ability of the borrower to prepay all or part of the mortgage places additional interest rate risk onto the lender (or on the MBS investor in the securitization model). In essence, the ability to prepay is an option that either is paid for explicitly through a prepayment fee at the time of the exercise of the option (i.e., at the time of any prepayment) or is paid for at the time of origination through a higher interest rate (which would likely reflect the lender’s expectation of the costs of the exercise of the option). A system of explicit prepayment fees thus reduces the lender’s interest rate risk and translates into lower interest rates for the mortgage.²³

²¹ In essence, the S&Ls were “borrowing short” (i.e., funding themselves through short-term deposits) and lending long” (originating and holding 30-year FRMs). Although interest rate risk was the initial source of difficulties for the S&L industry, it was “old fashioned” credit risk (and inadequate prudential regulation) on the subsequent investments by the industry that ultimately caused the S&L debacle of the late 1980s and early 1990s. For further discussion, see White (1991).

²² For example, the cash flows could be structured so that some security holders would receive a more even flow of payments, while the holders of counterpart securities would receive a correspondingly more erratic pattern of payments.

²³ Jaffee (2010, p. 23) suggests that the absence of prepayment fees on standard U.S. FRMs adds about 50 basis points (0.5 percentage points) to residential mortgage interest rates.

III. The Way Forward

A. The appropriate goals for a housing finance system.

In order to consider alternatives to the GSE system, it is worthwhile to begin with a statement of the appropriate goals for a housing finance system – including a statement of what ought not be the goals for housing finance.

Fundamentally, housing finance should embody the true societal costs – the opportunity costs – of lending for home purchases. Those costs encompass the fundamental time value of money, the costs of credit risk (i.e., the probabilities and costs of non-repayment), the costs of interest rate risks, and the costs associated with a mortgage’s being a relatively illiquid instrument.

Equally important is what a housing finance system should not try to do:

- It should not try to address the positive social externality or spillover effect from home ownership (such as home owner’s greater likelihood of becoming involved in community governance issues). Those externalities are better addressed by separate programs that focus directly on the externality: e.g., by specifically encouraging otherwise qualified low- and moderate-income households to become first-time home owners.
- It should not try to be a vehicle for accomplishing income redistribution. Income redistribution is best addressed through explicit programs that involve cash transfers rather than in-kind transfers and subsidies. Thus an emphasis on “affordable housing” should not be part of the housing finance system. Again, this goal is best addressed through separate programs.
- It should not try to be a vehicle for maintaining residential property values.

- It should not try to be a vehicle for supporting employment in the home building, real estate brokerage, or mortgage lending industries.²⁴

B. Buffering the U.S. economy from a housing collapse.

The deflation and then collapse of the U.S. housing bubble, beginning in 2006, has had devastating consequences for the U.S. economy. Although it would seem that the avoidance of a similar collapse in the future ought also to be a goal of a housing finance system, that goal may be too much to require from housing finance. However, buffering the U.S. economy from the consequences of a collapse – or, at least greatly reducing the consequences – is a reasonable goal. But that goal should be achieved outside of housing finance: through better prudential regulation – and especially higher capital requirements – for large systemic financial institutions.

This important point is best illustrated by a comparison of the consequences of the collapses of two recent bubbles: the collapse of the “tech” stock market bubble of the late 1990s, and the collapse of the housing bubble. Both collapses were of surprisingly equal magnitudes: aggregate losses of about \$7 trillion each.²⁵ However, their consequences were nowhere near comparable. The former collapse led to a comparatively mild recession of the U.S. economy; the latter collapse led to the “Great Recession,” the reverberations of which – especially with respect to U.S. unemployment – are still being felt strongly.

Why the difference? The losses from the collapse of the tech bubble were largely absorbed by households: through their direct holdings of equities, through their holdings of equities-based mutual funds, and through their pension funds’ holding of equities. In essence,

²⁴ As a more general matter, housing policy should not be relying on incentives, such as the deductibility of mortgage interest expenses by owner-occupiers for income tax purposes, which has the effect of encouraging households to borrow more than they otherwise would and thus to purchase more house (and more land) than they otherwise would. It also encourages excessive leveraging and the extraction of equity from housing, which makes homeowners more prone to default on their mortgages. Similarly, exempting owner-occupiers from capital gains taxes encourages investment in excessively large houses on excessively large lots.

²⁵ Greater detail can be found in White (2011), on which this discussion draws.

these were unleveraged holdings of the equities. The losses were borne; the households were poorer; they adjusted (downward) their spending; there were (negative, but comparatively mild) macroeconomic consequences; and the economy moved on.

In contrast, although most of the losses of the housing collapse have been absorbed by households, a non-trivial fraction of the losses – about \$1.3 trillion²⁶ – has been transferred to the financial sector through mortgage defaults and the consequent losses on the mortgages and MBS that have experienced the defaults. This \$1.3 trillion in losses has devastated the financial sector – because important parts of the financial sector (specifically, depository institutions, investment banks, the GSEs, and [to a more limited extent] insurance companies) are thinly capitalized (highly leveraged) and did not have sufficient capital (in essence, net worth) to absorb the losses. Those losses and the fears of consequent insolvencies and bankruptcies, compounded by uncertainties as to who exactly would bear the losses, caused the financial sector to freeze in the late summer of 2008. In turn, the U.S. stock market collapsed (which greatly magnified the loss of wealth for U.S. households), and far greater damage was inflicted on the U.S. economy.

There is, then, an important lesson from this comparison of the collapses of the two bubbles: Regardless of the system of housing finance that replaces the GSEs, prudential regulation of the financial sector must be greatly strengthened – with higher capital levels, so that the sector can survive even a collapse of the magnitude that was recently experienced.

C. A largely private residential mortgage finance system.²⁷

A largely²⁸ private residential mortgage finance system would have two major components: financing through depository institutions, and financing through private securitizations.²⁹

²⁶ This was the estimate of Zandi (2009), as of July 2009.

²⁷ This system described below approximates “Option 1” (p. 27) in the Treasury-HUD report that is mentioned in footnote 1.

1. Financing through depository institutions. What is often forgotten in the discussion of the future of mortgage finance is that the “traditional” vertically integrated form of mortgage finance through depository institutions remains as a significant part of the U.S. mortgage system. As of year-end 2007 (before the trauma of the financial crisis), U.S. depository institutions held 30% of the value of all single-family mortgages outstanding.³⁰ This share was surely adversely affected by the special advantages that the GSEs had had vis-a-vis the depository institutions: The GSEs could borrow at especially favorable rates because of their GSE status; they had lower capital requirements (2.5%) for holding whole loan mortgages in their portfolios than did the depository institutions (4%); and the GSEs were required to hold only 0.45% capital against the credit risk on their MBS on which they issued guarantees (and if the depository institutions chose to hold the GSEs’ MBS in their portfolios instead of whole loans, they were required to hold only 1.6% capital instead of 4%).³¹

Without the GSEs and their special advantages, the depositories’ share of the residential mortgage market would likely be at least as large as their 30% share in 2007, and probably larger. The depositories’ share would surely be yet larger if “covered bonds” – a bond that represents a claim on a depository institution but that also has specific mortgages as collateral,

²⁸ I use the term “largely”, rather than “wholly”, because FHA/VA mortgage insurance and Ginnie Mae guarantees on their securitizations are likely to remain; but FHA should be more directly focused on low- and moderate-income households, so as to encourage them to become first-time home owners.

²⁹ As Jaffee (2010) and Acharya et al. (2011, ch. 8) point out, many European countries have been able to maintain largely private residential mortgage finance systems and maintain higher rates of home ownership than is true for the U.S.

³⁰ These data are from the Federal Reserve’s “Flow of Funds”; see Frame and White (2011) for more detail. This 30% encompasses depository institution’s holding of “whole loan” mortgages and does not include their holdings of MBS.

³¹ This last capital advantage for the GSEs – that the total capital that needed to be held for mortgages that became MBS and were bought by banks was only 2.05% (= 0.45 + 1.6) – illustrates an important point for prudential regulation: Capital requirements for similar instruments need to be set similarly across the array of prudentially regulated financial institutions. Otherwise, like water flowing downhill, mortgages will flow to where the capital requirements are the lowest (i.e., where they can be leveraged to the greatest extent).

which are widely used in Europe – become more prevalent in the U.S.³² The mortgages that are likely to be held in depositories’ portfolios would include ARMs and non-standard mortgages that a depository’s loan officer believes to be a good credit risk (because of “soft” information about the borrower that convinces the loan officer that the borrower is a good risk but may be difficult to convey in a standardized form to the securitization markets); but, also, in the absence of the GSEs’ special advantages, depository institutions should also find worthwhile holding more mortgages that previously would have been sold to the GSEs.

2. “Private label” securitization. Prior to and alongside the explosion of subprime mortgage securitization of the decade of the 2000s, the securitization of “private label” securities (PLS) – i.e., MBS securitization by private-sector entities that weren’t Fannie Mae or Freddie Mac or didn’t have a guarantee from Ginnie Mae – that were composed of “prime jumbo” mortgages (i.e., high-quality mortgages that were larger in value than the “conforming loan” limits that applied to the GSEs) were a small but non-trivial part of the overall securitization market.³³ The implosion of sub-prime securitizations in 2007 and 2008 brought down all PLS MBS with them.

The GSEs and Ginnie Mae securitizations have expanded to fill the breach, so that over 90% of recent originations have been sold to the GSEs or securitized with a Ginnie Mae guarantee.³⁴ But with the GSEs and Ginnie Mae having filled the breach, it is now hard for PLS

³² This kind of structure is familiar in the U.S. market in the form of repurchase agreements (“repos”) and advances (loans) to depository institutions from the Federal Home Loan Bank System. For further discussion of covered bonds, see Packer et al. (2007). As is discussed below, life insurance companies and pension funds – as issuers of long-lived liabilities – are natural customers for the long-lived assets that arise from 30-year FRMs. Covered bonds (in addition to the senior tranches of “private label” securitizations that are discussed below) may be another financial instrument that encourage those categories of investors to these assets.

³³ As of year-end 2000, before the mushrooming of sub-prime securitization, the private label MBS outstanding totaled \$385.5 billion. This was approximately 13% of all outstanding MBS plus mortgages held in portfolio by the GSEs.

³⁴ Aiding that expansion has been the expansion of the conforming loan limit for the GSEs in high housing cost areas. Whereas the conforming loan limit was generally \$417,000 in 2007 (and it remains at that level in most

MBS to re-establish itself. In essence, the PLS MBS (and also depository originate-and-hold transactions) have been “crowded out” of the market by the expanded presence of the GSEs and Ginnie Mae (and their lower MBS yields and correspondingly lower mortgage costs that accompany their government guarantees). In addition, initial uncertainties about what the final financial reform legislative package would look like (and how it would affect securitization) and continuing uncertainties about the detailed regulations that are authorized by the Dodd-Frank Act of 2010 have also inhibited the possibilities of a revived PLS MBS effort.

Nevertheless, it is worth considering what the possibilities would be in a more stable environment and with the absence of the GSEs (and a limited role for Ginnie Mae, as the securitizer of FHA and VA mortgages). In that stable environment, PLS MBS should revive to fill that void. It is likely that the tranching structure that was described in Section II would be used to create a class of relatively safe securities and a class of first-loss (more risky) securities. Because there are at least two important categories of institutional investors – life insurance companies and pension funds, both of which have long-lived liabilities – that would be natural customers for the long-lived assets (probably in the senior tranches) that would be securitized from 30-year FRMs, it seems quite likely that the 30-year FRM would remain the staple of the American residential mortgage market.³⁵ Hedge funds and high-risk bond mutual funds would likely be the customers for the more junior tranches. Or it is possible that private mortgage bond insurers would be interested in offering insurance on some or all of the tranches of the PLS

areas), it was raised in 2008 and again in 2009 for high housing cost areas to amounts as high as \$729,750. Similarly, the ceiling on FHA loans (which become securitized with Ginnie Mae guarantees) is as high as \$729,750 in high housing cost areas. It is worth noting that the median sales price for existing homes in the U.S. at year-end 2009 was approximately 170,000; the median price of a new home was \$226,000.

³⁵ However, the appeal of those long-lived PLS MBS to these investor classes would likely be enhanced if the lender’s interest rate risk could be reduced through explicit prepayment fees; see the discussion in Section II.

MBS. Or the credit default swap (CDS) market might be a means for investors in the PLS MBS to reduce their risks.

Given the trauma that has been experienced as a consequence of the sub-prime securitization collapse, one would expect investors initially to be quite cautious. Tranching structures would likely be relatively simple; a great deal of information would be required and provided.³⁶ PLS MBS with higher quality underlying collateral would have larger senior tranches and smaller protective junior tranches; PLS MBS with lower quality collateral would have smaller senior tranches and larger junior tranches. Creditworthiness advisory services would surely be employed.

The general level of mortgage interest rates would be higher than they have been during the reign of the GSEs. This is an unavoidable consequence of the replacement of the GSEs – and their unpriced government guarantees – with a private-sector alternative. However, that increase is not likely to be large. The pre-crisis consensus of estimates for the effects of the GSEs in keeping mortgage interest rates low – which were largely driven by data that compared the mortgage rates on conforming loans with the rates on otherwise similar jumbo loans – placed that differential at about 25 basis points (0.25 percentage points).³⁷ This seems to be a reasonable estimate of the net increase in a post-crisis environment.

Further, given the presence of widespread subsidies for the consumption and construction of housing, especially through the income tax code, a reduction in the subsidy that occurs directly through housing finance would be an economically sensible move toward a more efficient allocation of the nation's resources.

D. How to get from here to there.

³⁶ If, for some reason, there seems to be an institutional barrier to the provision of adequate information for these securitizations, that would be a suitable area for government regulation.

³⁷ See Frame and White (2005) for a discussion.

As was discussed above, PLS MBS and depository institutions have largely been crowded out in the current environment by the GSEs and Ginnie Mae. Unless something changes, this crowding out will persist.

There are two clear paths to “crowding in” (i.e., reducing the crowding out of) the private sector; these two paths are not mutually exclusive.³⁸

1. Reduce the GSEs’ conforming loan limits.³⁹ A schedule of annual reductions – say 10% per year – should be established. This would gradually increase the range of “jumbo” mortgages that would be out of the domain of the GSEs and within the domain of PLS MBS and depository institutions.

2. Increase the GSEs’ guarantee fees.⁴⁰ The GSEs have typically charged about 20-25 basis points (0.20-0.25 percentage points) per year on the unpaid principal balance of their MBS, in return for the guarantee against credit risk that they provide to their MBS investors. A schedule of annual increases on new MBS – say, 5 basis points per year – should be established. As the guarantee fee increases, the GSE MBS would be less attractive to investors, which would open opportunities for PLS MBS and depository institutions. This would also have the advantage of, in the interim, earning a bit more income for the GSEs and thus reducing the burden that will eventually have to be absorbed by the U.S. taxpayer.

E. An alternative approach, with a side-by-side government guarantee.

There appears to be a widespread belief that a private residential mortgage finance system may not be viable and that some form of government guarantee for mortgages is

³⁸ Also, along with the reduction in new business, to which both routes point, the GSEs’ portfolios of mortgages should be gradually shrunk.

³⁹ This shrinkage should also apply to FHA loans (and thus Ginnie Mae securitizations), with the goal that FHA should be focusing on providing assistance to low- and moderate-income households, so as to encourage them to become home owners. This would imply substantially lower loan limits than even the \$271,050 amount (which is 65% of the GSEs’ \$417,000 conforming loan limit) that applies to FHA loans in areas without high housing costs.

⁴⁰ This route was recently proposed by Hempton (2011).

necessary. The discussion above argues otherwise. Nevertheless, it is worth considering what a government guarantee system – if that is the policy route that is chosen – ought to look like.

The prominent proposals appear to involve a system of private guarantees that would be provided on MBS,⁴¹ with the federal government providing “catastrophic” or “tail-risk” insurance, in the event that a private guarantor fails and cannot honor fully its guarantees.⁴² The federal government would charge an appropriate price for this back-up insurance.

As compared with the current GSE system, these proposals have a clear set of advantages: The government guarantee would be explicit; it would be priced; it would be on-budget; and it would apply only to the MBS and not to the private guarantors (or to the non-mortgage obligations of the guarantors).⁴³ And, if one believes that, in the event of another mortgage crisis, the federal government would inevitably come to the rescue anyway, at least the government will have received the guarantee fee revenue in return for its eventual rescue actions.⁴⁴

However, there is a major drawback: the pricing of the government guarantee. There would be no market or other transparent basis for the pricing of the guarantee. The political pressures for the government to under-price this tail-risk guarantee would surely be substantial;⁴⁵

⁴¹ The firms that provide the guarantees would be prudentially regulated, since they are, in essence, insurance companies.

⁴² See, for example, National Association of Home Builders (2010), National Association of Realtors (2010); Hancock and Passmore (2010, 2011); Dechario et al. (2010); Mortgage Bankers Association (2010); Center for American Progress (2011); Dynan and Gayer (2011) and Zandi and de Ritis (2011). These proposals are the basis for “Option 3” (p. 29) of the Treasury-HUD report that is mentioned in footnote 1. An alternative proposal, offered by Scharfstein and Sunderam (2011), would bring government guarantees into the picture only at times of general and severe distress in MBS markets and the guarantees would apply only to new MBS, so as to sustain the new supply of housing finance. This last variant appears to be the basis for “Option 2” (p. 28) in the Treasury-HUD report.

⁴³ In addition, almost all of the proposals recognize that government efforts to promote “affordability” of housing should be part of separate programs and should not be wrapped into the government guarantee system.

⁴⁴ However, as is argued above, better prudential regulation of (and, especially, higher required capital levels for) the financial sector should greatly diminish the possibilities that future problems in residential mortgage finance would mushroom into the larger financial and economic crisis that occurred in 2008-2009.

⁴⁵ The experience of under-priced federally provided flood insurance is not an encouraging precedent.

and the pricing problem would be even worse if there are multiple classes of securities (with varying qualities of underlying mortgages) that carried government guarantees. This underpricing would thus become a renewed vehicle for the government subsidization of mortgage borrowing.⁴⁶

As an alternative, consider the following:⁴⁷ The federal government would offer “side-by-side” insurance, alongside private MBS guarantors.⁴⁸ An initial ratio would be, say, 25% private and 75% government.⁴⁹ The guarantee would apply only to MBS that had prime mortgages (i.e., those that had a 20% down payment, suitably high FICO scores, and suitably low housing cost/income ratios) as collateral;⁵⁰ it would not be mandatory. The crucial point of this arrangement is the following: The pricing of the government portion of the MBS guarantee would be entirely passive and would match the private guarantors’ pricing. Thus the pricing of the government guarantee would be driven by the market pricing of the private guarantors.

A second advantage to this approach is that it has a natural path toward the private system that was discussed above: If the capital and other resources to support the private guarantor function proves strong, the government percentage can be reduced over time, with the eventual goal of establishing that private system.⁵¹

⁴⁶ With respect to the Scharfstein and Sunderam (2011) proposal, the Federal Reserve is already the agency with the clear responsibility for dealing with general and severe stress in U.S. financial markets, including MBS markets, so a new agency would be duplicative.

⁴⁷ This proposal is drawn from Acharya et al. (2011, ch. 8).

⁴⁸ Again, the MBS guarantors would be prudentially regulated.

⁴⁹ This 25/75 side-by-side arrangement does mean that the MBS would not be completely guaranteed, since (despite the presence of prudential regulation) the private guarantor might fail financially and be unable to honor its obligations on all or part of its guarantees (but the government would, of course, honor its 75% share of the guarantee). This incompleteness of the guarantee would provide some incentive for MBS investors to exercise some caution in their choice of guarantor.

⁵⁰ The purpose of limiting the government guarantee is to limit the exposure of the government and to avoid areas that might be thin and/or exotic and where the market’s pricing might be more likely to go astray.

⁵¹ Also, if the government guarantee is limited only to MBS that are based on loans that met the conforming loan limit for size, that size limit could be ratcheted down over time.

IV. Conclusion

The GSE system of residential mortgage finance is clearly broken. But what will replace it remains an unanswered question.

This paper has laid out the argument for a mortgage finance system that would rely on private markets. It also offers an alternative proposal for a side-by-side government guarantee that would be superior to the “tail-risk” proposals that are currently circulating.

Under either approach, residential mortgage finance would be a well-functioning system. Grass would not grow in the streets of America. But grass would continue to grow in the backyards of America.

References

Acharya, Viral V., Matthew Richardson, Stijn Van Nieuweburgh, and Lawrence J. White, Guaranteed to Fail: Fannie Mae, Freddie Mac and the Debacle of Mortgage Finance. Princeton: Princeton University Press, forthcoming 2011.

Center for American Progress, "A Responsible Market for Housing Finance: A Progressive Plan to Reform the U.S. Secondary Market for Residential Mortgages," Market Finance Working Group, January 2011; available at:
<http://www.americanprogress.org/issues/2011/01/pdf/responsiblemarketforhousingfinance.pdf>

Dechario, Toni, Patricia Mosser, Joseph Tracy, James Vickery, and Joshua Wright, "A Private Lender Cooperative Model for Residential Mortgage Finance," Federal Reserve Bank of New York, Staff Report No. 466, August 2010; available at:
http://www.ny.frb.org/research/staff_reports/sr466.pdf

Dynan, Karen and Ted Gayer, "The Government's Role in the Housing Finance System: Where Do We Go from Here?" presented at the Brookings Conference on "Restructuring the U.S. Residential Mortgage Market, February 11, 2011; available at:
http://www.brookings.edu/~media/Files/rc/papers/2011/0211_housing_finance_dynan_gayer/0211_housing_finance_dynan_gayer.pdf

Financial Services Roundtable, Housing Policy Council, "Moving beyond Fannie Mae and Freddie Mac: A Proposal for a New Generation of Entities to Facilitate a Secondary Market," February 26, 2010; available at:
<http://www.fsround.org/housing/pdfs/pdfs2010/MOVINGBEYONDFANNIEMAEANDFREDDIEMAC2-26-10.pdf>

Frame, W. Scott and Lawrence J. White, "Fussing and Fuming over Fannie and Freddie: How Much Smoke, How Much Fire?" Journal of Economic Perspectives, 19 (Spring 2005), pp. 159-184.

Frame, W. Scott and Lawrence J. White, "The Industrial Organization of the U.S. Residential Mortgage Market," in Anthony Sanders, Gregory Scruggs, and Susan Wachter, eds. The International Encyclopedia of Housing and Home. Elsevier, forthcoming 2011; available at:
http://web-docs.stern.nyu.edu/old_web/economics/docs/workingpapers/2010/Frame,%20White_The%20Industrial%20Organization%20of%20the%20U.S.%20Single-Family%20Residential%20Mortgage%20Industry.pdf

Hancock, Diana and Wayne Passmore, "An Analysis of Government Guarantees and the Functioning of Asset-Backed Securities Markets," Finance and Economics Discussion Series, #2010-46, Divisions of Research & Statistics and Monetary Affairs, Federal Reserve Board, 2010; available at: <http://www.federalreserve.gov/pubs/feds/2010/201046/201046pap.pdf>

Hancock, Diana and Wayne Passmore, "Catastrophic Mortgage Insurance and the Reform of Fannie Mae and Freddie Mac," presented at the Brookings Conference on "Restructuring the U.S. Residential Mortgage Market, February 11, 2011; available at:

http://www.brookings.edu/~media/Files/events/2011/0211_mortgage_market/0211_reform_fannie_freddie_hancock_passmore.pdf

Hempton, John, "What to do with Fannie and Freddie," January 24, 2011; available at: <http://brontecapital.blogspot.com/>

Jaffee, Dwight M. "Reforming the Mortgage Market through Private Incentives," paper prepared for presentation at "Past, Present, and Future of the Government Sponsored Enterprises," Federal Reserve Bank of St. Louis, November 17, 2010; available at <http://research.stlouisfed.org/conferences/gse/Jaffee.pdf>

Mortgage Bankers Association, "Letter to Timothy F. Geithner and Shaun Donovan," June 17, 2010.

National Association of Home Builders, "Future of Fannie Mae and Freddie Mac and the Housing Finance System," Resolution #3, January 18, 2010.

National Association of Realtors, "Recommendations for Restructuring the GSEs," 2010; available at: http://www.realtor.org/wps/wcm/connect/430e5f80418e341a9039fda3819af93a/government_affairs_gse_recomm_0810.pdf?MOD=AJPERES&CACHEID=430e5f80418e341a9039fda3819af93a

Packer, Frank, Ryan Stever, and Christian Upper, "The Covered Bond Market," BIS Quarterly Review (September 2007), pp. 43-55.

Scharfstein, David and Adi Sunderam, "The Economics of Housing Finance Reform: Privatizing, Regulating and Backstopping Mortgage Market," presented at the Brookings Conference on "Restructuring the U.S. Residential Mortgage Market, February 11, 2011; available at: <http://www.treasury.gov/initiatives/Documents/Reforming%20America%27s%20Housing%20Finance%20Market.pdf>

U.S. Department of the Treasury and U.S. Department of Housing and Urban Development, "Reforming America's Housing Finance Market: A Report to Congress," February 11, 2011; available at: <http://www.treasury.gov/initiatives/Documents/Reforming%20America%27s%20Housing%20Finance%20Market.pdf>

White, Lawrence J., The S&L Debacle: Public Policy Lessons for Bank and Thrift Regulation. New York: Oxford University Press, 1991.

White, Lawrence J., "Preventing Bubbles: What Role for Financial Regulation?" Cato Journal, forthcoming 2011.

Zandi, Mark, “Testimony on ‘Systemic Risk: Are Some Institutions Too Big to Fail, and If so, What Should We Do about IT?’” before the Financial Services Committee, U.S. House of representatives, July 21, 2009.

Zandi, Mark and Cristian de Ritis, “The Future of the Mortgage Finance System,” Moody’s Analytics, February 7, 2011; available at:
<http://www.economy.com/mark-zandi/documents/Mortgage-Finance-Reform-020711.pdf>